



Emerging Client Technology

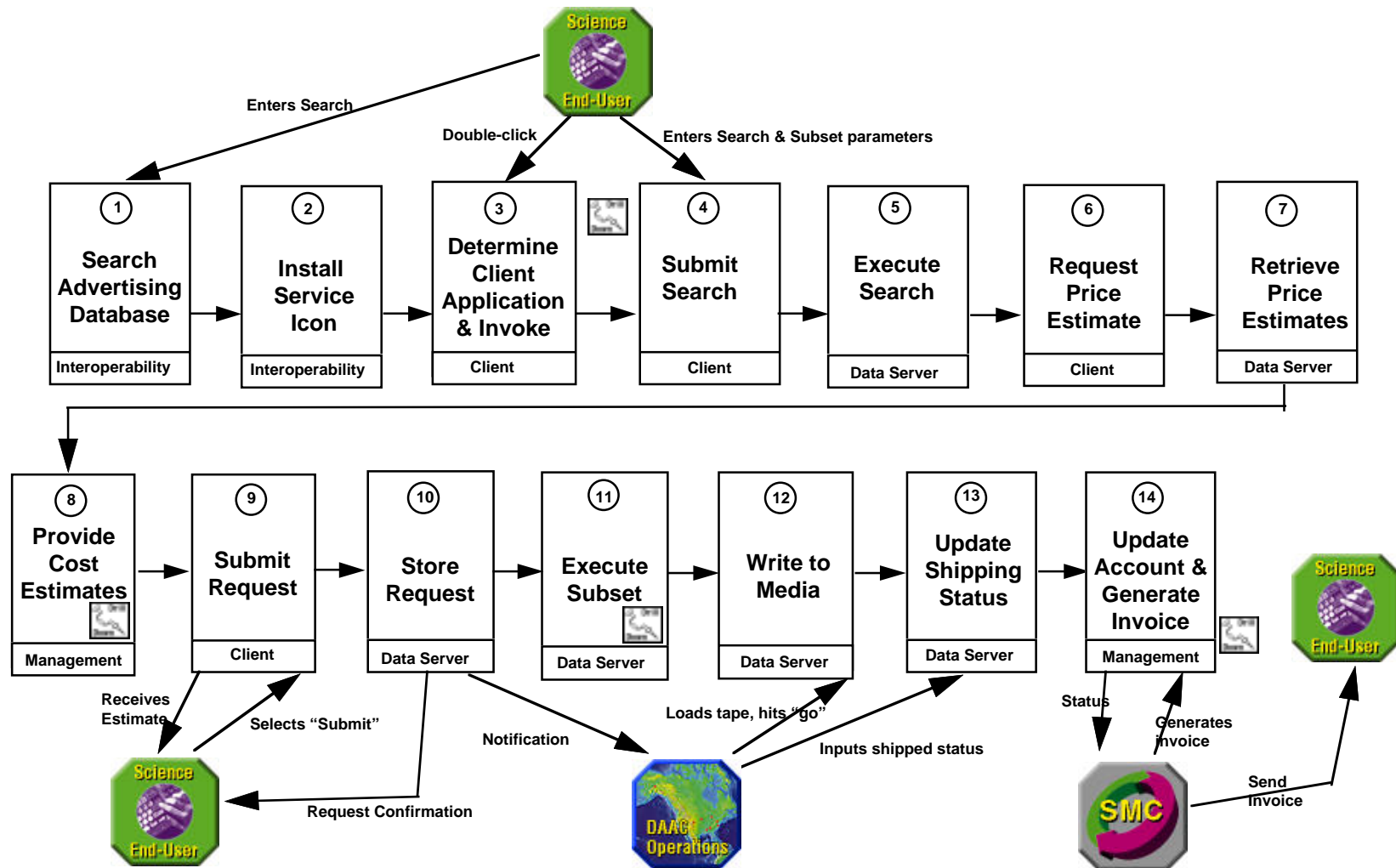
Mike Daily

mdaily@eos.hitc.com

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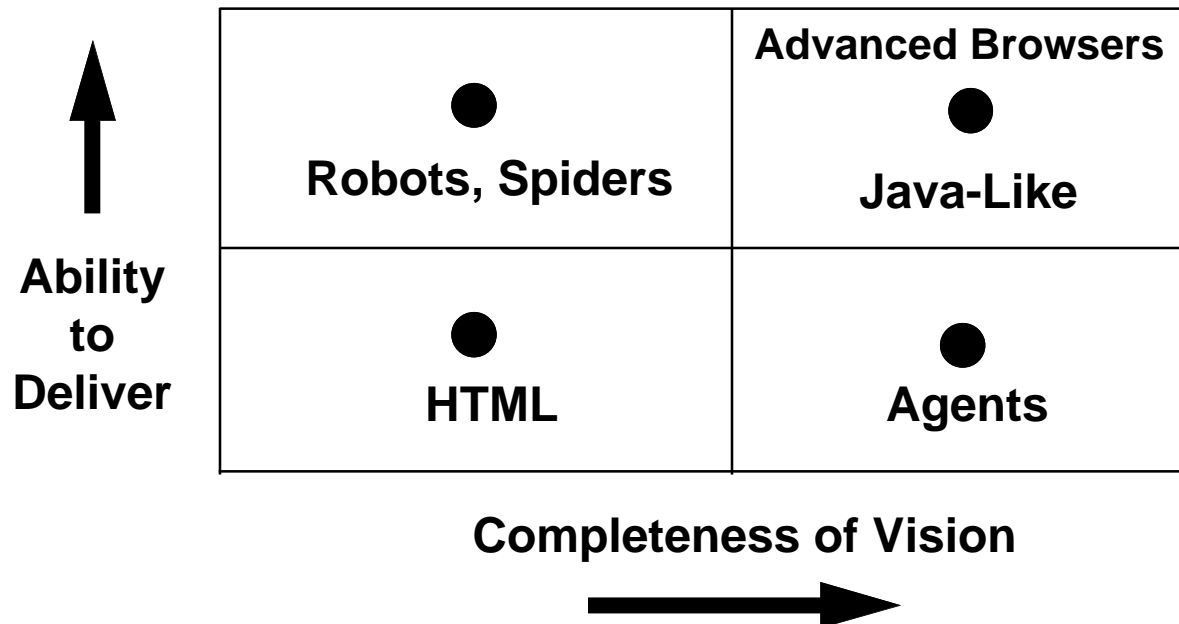
Quick Access Functional Flow Diagram





Overview

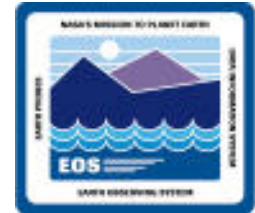
- Focus is alternative clients
- No focus on VR, rendering, simulation
- Drivers include Web, federated systems, resource discovery





Design Drivers

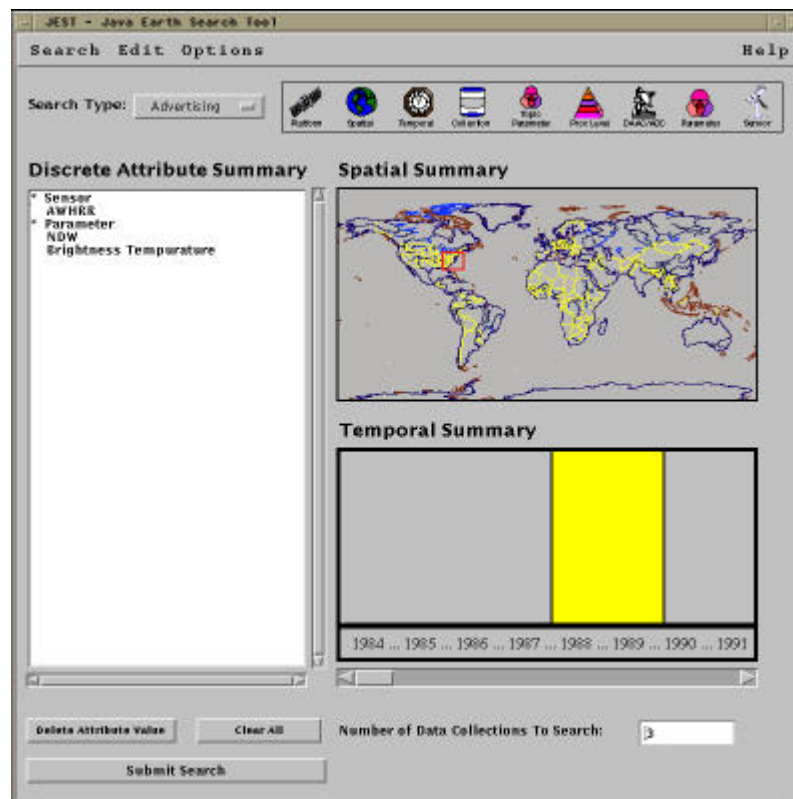
Problem	1000 advertisers 10,000 other relevant sources 100,000 + overall URLs
HTML	Text-oriented, Advertising Service OK, other sources not
Robot	Prefetches and indexes keywords, useful for pruning external sources
Agents	'Intelligent robots': more dynamic, better filtering (concept-based), eventual content-based from non-text
Java	Invoke complex applications without installation cross-platform UNIX, PC, Mac



Requirements Fit: Web \pm Java

Client Requirements (Motif Clients)	Web w/o Java (HTML)	Web with Java
Session Management: terminate, suspend, resume, batch, disconnect client	Supports terminate and batch only	Could support all but disconnect client
Dependent valids (i.e.: restricting future valid choices by currently selected choices).	Only supported by check after request submitted.	Supports
Spatial selections from a map	Can support with multiple trips to the server, one for each point in the selection region. Too inefficient.	Can support, but performance concerns with interpretive language, plus lack of COTS solutions for map manipulation.
Seamless integration with Desktop	Cannot support. Future will allow integration with Netscape and Windows desktops, but no announcements for UNIX.	Supports, but not in drag and drop mode. (??)
Location transparency of services	Not supported. Must connect to URL of some predetermined server.	Not supported without a lot of infrastructure custom code.
Dynamic display of request status	Not supported except through browser unique functions (such as Netscape dynamic pages).	Supported
Security	Weak; passwording	Asserted
Platform & Licensing	Good	Solaris, Win 95, NT
GUI Tools	Simple forms	Immature but evolving

Prototype: Java/ESST



Status

GUI Tools?

Security

Link via DSS

Java Graphics

Screen Mockup

Meet with DSS, CIDM

Java Learning



Current Status

COTS

- Analysis of Java GUI Builders
- Track Java alternatives

Prototypes

- Aggressive learning on Java
- Link to secure Web prototypes
- Track agent prototypes

Next Steps

- Is Java ready and fit?
- Key issues: security, distributed middleware

Summary



- **Strong technology pull from Web**
- **Java-like solutions improve access**
- **Agents help prune search**
- **Security is a big issue, but market demands it**
- **Aggressive early prototyping to understand**
- **On-going tracking**
- **“Just-in-time” technology insertion as tools mature**
- **Maintain parallel track at least until CDR**